Application No.:

10/712,634

Amendment Dated:

August 20, 2007

Reply to Office Action of: May 18, 2007

## **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

SNK-3750US6

## **Listing of Claims:**

- 1-77. (Cancelled).
- 78. (Withdrawn) A laser light source comprising:
- a semiconductor laser for emitting a fundamental wave;
- a single mode fiber for conveying the fundamental wave; and

an optical wavelength conversion element for receiving the fundamental wave from the fiber and generating a harmonic wave, the optical wavelength conversion element having periodic domain inverted structures,

wherein the optical wavelength conversion element has a modulation function.

- 79. (Withdrawn) A laser light source according to claim 78, wherein the optical wavelength conversion element is formed in an LiNb $_x$ Ta $_{1-x}$  O $_3$  (0  $\leq$  X  $\leq$  1) substrate.
  - 80. (Currently Amended) A laser light source, comprising:
- a semiconductor laser for emitting pumping light having an output greater than or equal to 1W;
  - a fiber for conveying the pumping light;
- a solid state laser crystal for receiving the pumping light from the fiber and generating a fundamental wave; and
- a bulk type optical wavelength conversion element without an optical waveguide, for receiving the fundamental wave and generating a harmonic wave, the optical wavelength conversion element having periodic domain inverted structures,

Application No.: 10/712,634 SNK-3750US6

Amendment Dated:

August 20, 2007 Reply to Office Action of: May 18, 2007

wherein the fiber is configured to prevent a variation in temperature of the optical wavelength conversion element caused by a heat generated from the semiconductor laser, the fiber being positioned between the semiconductor laser and the optical wavelength conversion element.

81. (Cancelled).

- 82. (Previously Presented) A laser light source according to claim 80, wherein the optical wavelength conversion element is formed in an LiNb<sub>x</sub>Ta<sub>1-x</sub>O<sub>3</sub> (0  $\leq$  X  $\leq$  1) substrate.
- (Previously Presented) A laser light source according to claim 80, 83. wherein the solid state laser crystal and the optical wavelength conversion element are integrated together.
  - 84. (Currently Amended) A laser light source, comprising:
- a semiconductor laser for emitting pumping light having an output greater than or equal to 1W;
- a solid state laser crystal for receiving the pumping light and generating a fundamental wave;
  - a single mode fiber for conveying the fundamental wave; and
- a bulk type optical wavelength conversion element without an optical waveguide, for receiving the fundamental wave from the fiber and generating a harmonic wave, the optical wavelength conversion element having periodic domain inverted structures,

wherein the single mode fiber is configured to prevent a variation in temperature of the optical wavelength conversion element caused by a heat generated from the semiconductor laser, the single mode fiber being positioned between the semiconductor laser and the optical wavelength conversion element.

85. (Cancelled). Application No.:

10/712,634

Amendment Dated:

August 20, 2007

Reply to Office Action of: May 18, 2007

86. (Withdrawn) An optical disk apparatus, comprising:

an optical pickup incorporating therein the optical wavelength conversion element for converting a fundamental wave to a harmonic wave;

SNK-3750US6

a laser light source, provided separately from the optical pickup, for generating laser light; and

an actuator for moving the optical pickup,

wherein the laser light radiated from the laser light source is incident upon the optical pickup via an optical fiber.

- 87. (Withdrawn) An optical disk apparatus according to claim 86, wherein the laser light source includes a semiconductor laser disposed outside the optical pickup.
- 88. (Withdrawn) An optical disk apparatus according to claim 87, wherein the laser light source further comprises a solid state laser crystal for generating a fundamental wave using laser light emitted from the semiconductor laser as pumped light.
  - 89. (Withdrawn) An optical disk apparatus according to claim 88, wherein:

the solid state laser crystal is disposed outside the optical pickup; and the fundamental wave generated by the solid state laser medium is incident upon the optical wavelength conversion element via the optical fiber.

90. (Withdrawn) An optical disk apparatus according to claim 88, wherein:

the solid state laser crystal is disposed inside the optical pickup; and the laser light emitted from the semiconductor laser is incident upon the solid state laser via the optical fiber.

91. (New) A laser light source according to claim 80, Application No.:

10/712,634

Amendment Dated:

August 20, 2007

Reply to Office Action of: May 18, 2007

wherein the solid state laser crystal is attached to the optical wavelength conversion element.

SNK-3750US6

92. (New) A laser light source according to claim 84,

wherein the single mode fiber is connected between the solid state laser crystal and the optical wavelength conversion element.

93. (New) A laser light source according to claim 80,

wherein the semiconductor laser is fixed in a housing without active cooling.

94. (New) A laser light source according to claim 84,

wherein the semiconductor laser is fixed in a housing without active cooling.